

Harris Mill
East corner Main and Prospect Streets
Harrisville
Cheshire County
New Hampshire

HABS No. NH-171

HABS
N.H.
3-HAR
1-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
Office of Archeology and Historic Preservation
National Park Service
Department of the Interior
Washington, D.C. 20240

HISTORIC AMERICAN BUILDINGS SURVEY

HABS No. NH-171

HARRIS MILL

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Location: East corner, Main and Prospect Streets, Harrisville, Cheshire County, New Hampshire.
Geographic Location Code: 28 - 0213 - 005
Latitude: 42° 56' 45" N Longitude: 72° 05' 40" W
(Approx. center intersection of Main and Grove Streets.)

Present Owner: Cheshire Mills Co., Main Street, Harrisville, New Hampshire.

Present Occupant: Cheshire Mills Co.

Present Use: Storage.

Statement of Significance: The earliest surviving woolen mill in the village, it was built by Milan Harris in 1832-1833. It is a rare example of pre-"slow-burning" mill construction with its joist floor framing and low "trap door" clerestory windows.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Original and subsequent owners: Milan Harris, Henry Melville, Abner S. Hutchinson; original partnership. From 1833 to 1879 the building was owned by a series of partnerships in which the Harris family maintained a continuing interest. From 1879 to the present, ownership by Cheshire Mills Co. (firm in receivership, as of first half of 1971).
2. Dates of erection: 1832-1833.
3. Architect: Unknown.
4. Builder, suppliers: Unknown.
5. Original plan and construction: The original building was two and one-half stories high, 60'-2" long and 36'-1" wide, with a central bell cupola on the roof; the exterior walls are brick and the interior is framed in wood joists, beams and columns in a manner common before "slow-burning" construction was introduced although this building was constructed ten years after the beginnings of this innovation.

6. Alterations and additions: A two bay (approximately 20') addition and stair tower was built on the south end of the building after 1861. At that time the original bell cupola was presumably moved to cap the new stair tower.

B. Sources of Information:

1. Primary and unpublished sources:

Armstrong, John Borden. "Harrisville: A New Hampshire Mill Town in the 19th Century." Ph.D. Dissertation, Boston University. (Microfilm copy on file at National Museum of History and Technology, Smithsonian Institution, Washington, D.C.) See bibliography for complete list of unpublished sources.

2. Secondary and published sources:

Armstrong, John Borden. Factory Under the Elms. Massachusetts Institute of Technology, Boston: 1969. This is the first book to be published on Harrisville. It is based on the Ph.D. Dissertation cited above.

Hellman, Peter. "A 'Williamsburg' That's Really Lived In," New York Times (Sunday, March 28, 1971), Section XX, pp. 7, 35.

Prepared by Robert M. Vogel and
Ted Sande
National Park Service
August 12-14, 1968;
July 1971

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: A typical small rural New England brick textile mill of the early Nineteenth Century; now used as a storehouse by the Cheshire Mill. Two bays and the tower were added to the south end after 1861.
2. Condition of fabric: The masonry side walls and the wood floors and roof over the canal show considerable deflection. The floors are in a bad state of repair.

B. Description of Exterior:

1. Over-all dimensions: The original mill was rectangular, approximately 36' x 60' in size. It was lengthened to approximately 79' and the 12' x 12' tower was added after 1861. It is now three aisles wide and seven bays long.
2. Foundations: Foundation walls below the irregular grade line are rough granite rubble down to bedrock, there is some settlement at the center of the side walls. Portions of the original granite foundation walls, before the extension, may be seen below the first floor.

A rare example of a New England textile mill built c. 1832 with the barn floor framing rather than the slow-burning or "mill" interior framing, and not subsequently converted to the less hazardous structural system. (After the early 1820's the later system was almost universally adopted.)

3. Wall construction, finish and color: Exterior walls are of red brick produced locally. Bricks are $3\frac{1}{2}$ " x 8" x 2" in size, ten courses in 24", with headers every eighth course. The brickwork of the addition and tower closely match the original building.
4. Structural system, framing: Exterior main walls and the walls of the tower are 12" in thickness. Interior columns are 8" x 8", with corners bevelled, somewhat irregularly spaced, often not carrying through to the floor above. Four columns on the first floor are apparently original; others of more recent date are not regularly spaced.

Principle transverse beams are hewn - 10" x 11" and 10" x 12" in single lengths (except for a few replacements, sawn and butt jointed over one column). All first floor framing was probably replaced within the last twenty years. Second floor framing: several longitudinal and transverse sub-beams; irregularly spaced longitudinal joists $2\frac{1}{2}$ " to 3" by 8" sawn, mortised into the principle beams.

Attic floor framing: 8" x 8" longitudinal sub-beams, sawn and hewn, mortised into principle beams at third points, except in the third bay from the front where they are set somewhat closer to walls with a third sub-beam off center; this original end bay may have defined a stairway. Transverse joists are mortised into sub-beams, five per bay in original portion, four in two new end bays.

Second floor framing: over joists at 18" o.c. two thicknesses of 1" sawn plank, both laid transverse; the wearing course was apparently replaced later. Attic flooring: similar to second, except laid in longitudinal direction.

Roof framing is of hewn rafters, square $7\frac{1}{2}$ " to $8\frac{1}{2}$ ", 3'-0" o.c., mortised into the sawn ridge pieces. Sawn columns 8" x 10" every fourth rafter; ridge pieces are mortised into the columns. Ceiling framing with sawn, mortised and tenon joints is apparently later construction. In 1967 the rafters were braced at third points to the columns to help o.k. the roof sag.

5. Openings: Masonry window openings are 36" x 68". Sash are double-hung wood, twelve lights each. On the front windows and tower doors the lintels and sub-sills are quarry-faced granite. On the sides and rear of the building the sills are wood, and the brickwork above is supported by only the 3" window frames; many show evidence of failure. All windows are now boarded up. The large service doors on the tower are off center, permitting space for the stair on the right side.
6. Roof:
 - a. Shape, covering: Roof sheathing boards appear to be of varying dates. The earliest are rough sawn 1" random widths up to 15". Later of similar sizes, planed, T & G. Roofing is slate over wood shingles of an earlier date.
 - b. Cornice, eaves: The main cornice, with classical mouldings, is of wood, and projects 16" from the exterior wall face. Above the rafters there are fillers which raise the upper portion of the roof to admit a strip of small monitor windows. Each window is approximately 26" wide and 10" high; the band of openings, on both sides of the roof, extends five bays.
 - c. Dormers, cupolas, towers: The belfry was originally located in the center of the early smaller building, and it was probably moved intact to the new stair tower. In 1968 the tower roof, the belfry, and the weathervane were reconstructed following the original design.

C. Description of Interior:

1. Floor plans: The rectangular space on each of the floors is undivided. Due to replacements the pattern of the

wood columns is irregular, usually forming three aisles.

2. Stairways: In the front tower the winding wood stair has twelve risers each floor (9" to 9- $\frac{1}{2}$ " each riser). The central post is 8" x 8", bevelled to octagonal form.
3. Wall and ceiling finish: Interior walls are exposed brickwork, whitewashed. Beams, joists and flooring are exposed, unpainted. The windows are trimmed with 3" plain wood facings.
4. Mechanical equipment: At the entrance, first floor of the tower, there is a cast iron manifold and valves for manually controlling the sprinkler system. The system piping, still in place in parts of the building, is soldered galvanized sheet metal.

The building is lighted with a minimum of incandescent globes; wiring was recently installed and is inadequate.

Some of the piping of the steam pipe coils-heating system are still in place. There are no sanitary facilities in the building.

D. Site and Surroundings:

General setting and orientation: The mill is built over the power canal of the Nubanusit River just below the Harrisville Pond. The head gate is on the west side of the building, and the tail race is on the east below the first floor. There are no traces of the turbine or wheelpit.

On the east side of the building there is a deep ravine and the stream falls rapidly to the east. Entrance from Main Street is through the stair tower. The level of the first floor is somewhat below the grade at the entrance doorway.

Prepared by Melvin M. Rotsch
Architect
Texas A & M University
August 1968

PART III. PROJECT INFORMATION

This building was recorded as part of the New England Textile Mill Survey II; which was sponsored by the Historic American Buildings Survey of the Office of Archeology and Historic Preservation of the National Park Service, and the Smithsonian Institution. The project was assisted by the Merrimack Valley Textile Museum, North Andover, Mass.;

the Fall River Historical Society; and the Bristol Community College, Fall River, Mass. It was the second of two summer surveys whose purpose was to record representative examples of the buildings of the New England Textile industry.

The field work, historical research and record drawings were done in the summer of 1968 under the direction of Robert M. Vogel (Curator of Mechanical and Civil Engineering, Museum of History and Technology, Smithsonian Institution), Project Director; Professor Melvin M. Rotsch (Architect, Texas A & M University), Project Supervisor; and David L. Bouse (University of Nebraska), Peter S. Conrad (Yale University), Eric N. DeLony (Ohio State University), and Dennis W. Jacobs (University of Kansas), Student Assistant Architects.

Historic documentation and editing of the project data were done in the summer of 1971 by Ted Sande (Architect, University of Pennsylvania), under the auspices of the Historic American Engineering Record of the Office of Archeology and Historic Preservation of the National Park Service.